

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P275559

Luminaire Tested: **14CZ2-20-S-UNV-L83050-W2A1-U-4500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P275559
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-40)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14CZ2-20-S-UNV-L83050-W2A1-U-4500K
Description: CRUZE 2.0 1x4 TUNABLE WHITE LED TROFFER
WITH SMOOTH LENS
Light Source: (168) 80 CRI LEDS TUNED TO 4500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2226.0 lumens
Efficiency: N/A
Efficacy: 138.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.27 / 1.36
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

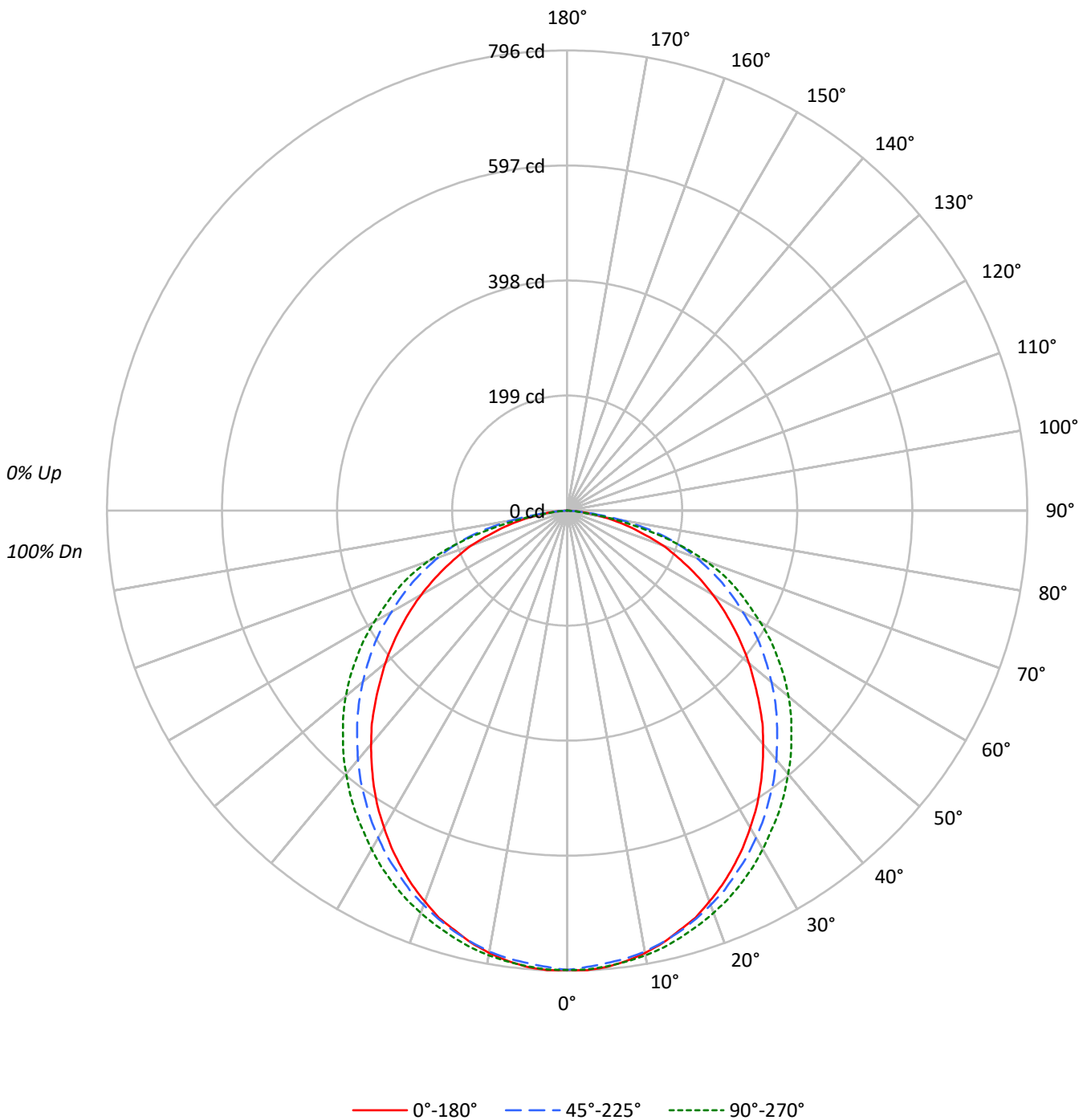
Input Watts (W): 16.089
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|-----|---|--|---|
| RF | 20 | | | | | 20 | | | | | 20 | | | | | 20 | | | | | 20 | | | | | |
| RC | 80 | | | | | 70 | | | | | 50 | | | | | 30 | | | | | 10 | | | | | 0 |
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 | | |
| RCR | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | | | | 100 | | | |
| 1 | 109 | 104 | 100 | 96 | 106 | 102 | 98 | 94 | 97 | 94 | 91 | 94 | 91 | 89 | 90 | 88 | 86 | 84 | | | | | 84 | | | |
| 2 | 99 | 90 | 84 | 78 | 96 | 89 | 82 | 77 | 85 | 80 | 75 | 82 | 77 | 73 | 79 | 75 | 72 | 70 | | | | | 70 | | | |
| 3 | 90 | 79 | 71 | 65 | 87 | 78 | 70 | 64 | 75 | 68 | 63 | 72 | 66 | 62 | 69 | 65 | 61 | 58 | | | | | 58 | | | |
| 4 | 82 | 70 | 61 | 55 | 80 | 69 | 61 | 54 | 66 | 59 | 53 | 64 | 58 | 53 | 62 | 56 | 52 | 50 | | | | | 50 | | | |
| 5 | 76 | 63 | 54 | 47 | 74 | 62 | 53 | 47 | 59 | 52 | 46 | 57 | 51 | 46 | 56 | 50 | 45 | 43 | | | | | 43 | | | |
| 6 | 70 | 56 | 47 | 41 | 68 | 55 | 47 | 41 | 54 | 46 | 40 | 52 | 45 | 40 | 50 | 44 | 40 | 38 | | | | | 38 | | | |
| 7 | 65 | 51 | 42 | 36 | 63 | 50 | 42 | 36 | 49 | 41 | 36 | 47 | 41 | 35 | 46 | 40 | 35 | 33 | | | | | 33 | | | |
| 8 | 60 | 47 | 38 | 32 | 59 | 46 | 38 | 32 | 45 | 37 | 32 | 43 | 37 | 32 | 42 | 36 | 32 | 30 | | | | | 30 | | | |
| 9 | 56 | 43 | 35 | 29 | 55 | 42 | 34 | 29 | 41 | 34 | 29 | 40 | 33 | 29 | 39 | 33 | 28 | 27 | | | | | 27 | | | |
| 10 | 53 | 40 | 32 | 26 | 52 | 39 | 31 | 26 | 38 | 31 | 26 | 37 | 31 | 26 | 36 | 30 | 26 | 24 | | | | | 24 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2138 | 2138 | 2138 |
| 5° | 2140 | 2123 | 2138 |
| 10° | 2123 | 2117 | 2135 |
| 15° | 2094 | 2100 | 2128 |
| 20° | 2061 | 2080 | 2121 |
| 25° | 2019 | 2055 | 2114 |
| 30° | 1968 | 2030 | 2102 |
| 35° | 1914 | 2001 | 2096 |
| 40° | 1853 | 1977 | 2090 |
| 45° | 1785 | 1953 | 2087 |
| 50° | 1719 | 1931 | 2093 |
| 55° | 1647 | 1916 | 2087 |
| 60° | 1568 | 1889 | 2073 |
| 65° | 1476 | 1883 | 2073 |
| 70° | 1389 | 1867 | 2015 |
| 75° | 1205 | 1825 | 1722 |
| 80° | 975 | 1471 | 1145 |
| 85° | 648 | 513 | 340 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 75.0 | 3.4 |
| 10°-20° | 213.5 | 9.6 |
| 20°-30° | 320.3 | 14.4 |
| 30°-40° | 382.1 | 17.2 |
| 40°-50° | 395.0 | 17.7 |
| 50°-60° | 360.6 | 16.2 |
| 60°-70° | 283.8 | 12.8 |
| 70°-80° | 165.2 | 7.4 |
| 80°-90° | 30.4 | 1.4 |
| 90°-100° | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 608.9 | 27.4 |
| 0°-40° | 990.9 | 44.5 |
| 0°-60° | 1746.6 | 78.5 |
| 0°-90° | 2226.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2226.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 795 | 795 | 795 | 795 | 795 | |
| 5° | 792 | 790 | 786 | 792 | 791 | 75 |
| 15° | 752 | 753 | 754 | 764 | 764 | 212 |
| 25° | 680 | 683 | 692 | 709 | 712 | 313 |
| 35° | 583 | 590 | 609 | 632 | 638 | 364 |
| 45° | 469 | 484 | 513 | 542 | 548 | 362 |
| 55° | 351 | 370 | 408 | 438 | 445 | 314 |
| 65° | 232 | 256 | 296 | 319 | 326 | 230 |
| 75° | 116 | 144 | 176 | 172 | 166 | 123 |
| 85° | 21 | 30 | 17 | 13 | 11 | 27 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 794.6 | 794.6 | 794.6 | 794.6 | 794.6 |
| 2.5° | 795.7 | 793.5 | 790.2 | 795.7 | 794.6 |
| 5° | 792.4 | 790.2 | 785.8 | 792.4 | 791.3 |
| 7.5° | 785.8 | 783.6 | 781.4 | 788.0 | 786.9 |
| 10° | 777.0 | 775.9 | 774.8 | 782.5 | 781.4 |
| 12.5° | 765.9 | 765.9 | 764.8 | 773.7 | 773.7 |
| 15° | 751.6 | 752.7 | 753.8 | 763.7 | 763.7 |
| 17.5° | 738.4 | 737.3 | 740.6 | 751.6 | 752.7 |
| 20° | 719.6 | 721.8 | 726.2 | 739.5 | 740.6 |
| 22.5° | 700.8 | 703.0 | 710.8 | 724.0 | 727.3 |
| 25° | 679.9 | 683.2 | 692.0 | 708.6 | 711.9 |
| 27.5° | 657.8 | 662.2 | 674.3 | 692.0 | 695.3 |
| 30° | 633.5 | 640.1 | 653.4 | 673.2 | 676.6 |
| 32.5° | 609.2 | 615.8 | 632.4 | 652.3 | 656.7 |
| 35° | 582.7 | 590.5 | 609.2 | 632.4 | 637.9 |
| 37.5° | 555.1 | 565.1 | 587.2 | 610.3 | 617.0 |
| 40° | 527.6 | 538.6 | 562.9 | 587.2 | 594.9 |
| 42.5° | 500.0 | 511.0 | 537.5 | 565.1 | 572.8 |
| 45° | 469.1 | 484.5 | 513.2 | 541.9 | 548.5 |
| 47.5° | 439.3 | 455.8 | 487.8 | 516.5 | 525.3 |
| 50° | 410.6 | 427.1 | 461.3 | 491.1 | 500.0 |
| 52.5° | 380.8 | 398.4 | 434.8 | 465.8 | 473.5 |
| 55° | 351.0 | 369.7 | 408.4 | 438.2 | 444.8 |
| 57.5° | 321.2 | 341.0 | 380.8 | 409.5 | 417.2 |
| 60° | 291.4 | 312.3 | 351.0 | 379.7 | 385.2 |
| 62.5° | 261.6 | 283.6 | 323.4 | 348.8 | 354.3 |
| 65° | 231.8 | 256.1 | 295.8 | 319.0 | 325.6 |
| 67.5° | 203.1 | 227.4 | 266.0 | 288.1 | 293.6 |
| 70° | 176.6 | 198.7 | 237.3 | 253.8 | 256.1 |
| 72.5° | 143.5 | 171.1 | 208.6 | 217.4 | 211.9 |
| 75° | 115.9 | 143.5 | 175.5 | 172.2 | 165.6 |
| 77.5° | 88.3 | 115.9 | 136.9 | 125.8 | 117.0 |
| 80° | 62.9 | 90.5 | 94.9 | 78.4 | 73.9 |
| 82.5° | 40.8 | 62.9 | 53.0 | 40.8 | 33.1 |
| 85° | 21.0 | 29.8 | 16.6 | 13.2 | 11.0 |
| 87.5° | 6.6 | 4.4 | 2.2 | 2.2 | 1.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)